Article 34

09/462993
514 Rec'd PCT/PTO 18 JAN 2000

Claims

1. Antitumoral composition comprising at least one recombinant vector containing sequences encoding one or more immunogenic polypeptide(s), wherein ~~characterized in that~~ at least one of said polypeptides is a polypeptide naturally having a nonmembrane location and which is modified by inserting a membrane anchoring sequence so as to have a membrane location in the cells in which it is expressed.

2. Antitumoral composition according to claim 1, wherein ~~characterized in that~~ said polypeptide naturally has a nuclear location and is, in addition, deleted for its natural nuclear localization sequence.

Sub A1

3. Antitumoral composition according to either of claims 1 and 2, characterized in that said membrane anchoring sequence is selected from the group consisting of that of the rabies glycoprotein, of the HIV virus env glycoprotein and of the measles virus F protein.

4. Antitumoral composition according to one of claims 1 to 3, characterized in that said immunogenic polypeptide originates from an early and/or late region of a papillomavirus.

Sub A2

5. Antitumoral composition according to claim 4, characterized in that said immunogenic polypeptide is derived from a polypeptide of the early region of a papillomavirus.

6. Antitumoral composition according to claim 5, characterized in that said immunogenic polypeptide is derived from an E6 or E7 polypeptide of a papillomavirus.

7. Antitumoral composition according to claim 6, characterized in that said immunogenic polypeptide is derived from a nononcogenic variant of said E6 or E7 polypeptide of a papillomavirus.

8. Antitumoral composition according to claim 4, characterized in that said immunogenic polypeptide is

copy as submitted

derived from the L1 or L2 polypeptide of a papillomavirus.

9. Antitumoral composition according to one of claims 1 to 8, characterized in that at least one immunogenic polypeptide is derived from an early polypeptide and at least one immunogenic polypeptide is derived from a late polypeptide of a papillomavirus.

10. Antitumoral composition according to one of claims 1 to 9, characterized in that at least one immunogenic polypeptide is such that:

(1) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 1,

(2) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 2,

(3) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 1 and an immunogenic polypeptide having a sequence homologous or identical to that shown in SEQ ID NO: 2,

(4) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 1, an immunogenic polypeptide derived from the L1 protein of a papillomavirus and/or an immunogenic polypeptide derived from the L2 protein of a papillomavirus,

(5) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 2, an immunogenic polypeptide derived from the L1 protein of a papillomavirus and/or an immunogenic polypeptide derived from the L2 protein of a papillomavirus, or

(6) said immunogenic polypeptide has a sequence homologous or identical to that shown in SEQ ID NO: 1, an immunogenic polypeptide having a sequence homologous or identical to that shown in SEQ ID NO: 2, an immunogenic polypeptide derived from the L1 protein of a papillomavirus and/or an

immunogenic polypeptide derived from the L2 protein of a papillomavirus.

11. Antitumoral composition according to ~~one of claims 1 to 10~~ Claim 1, characterized in that said recombinant vector comprises, in addition, the sequences encoding at least one compound enhancing the antitumoral effect of said composition.

12. Antitumoral composition according to claim 11, characterized in that said compound enhancing the antitumoral effect is an immunostimulator.

13. Antitumoral composition according to claim ~~12~~, characterized in that said immunostimulatory compound is selected from the group consisting of interleukin-2, interleukin-7, interleukin-12 and the coadhesion molecules B7.1 and B7.2.

14. Antitumoral composition according to ~~one of claims 1 to 13~~ Claim 1, characterized in that said recombinant vector is derived from a poxvirus.

15. Antitumoral composition according to ~~one of claims 1 to 14~~ Claim 1, containing a pharmaceutically acceptable carrier allowing its administration by injection into humans or into animals.

16. Recombinant vector comprising the sequences encoding one or more immunogenic polypeptide(s), characterized in that at least one of said polypeptides has the characteristics defined in ~~claims 1 to 15~~ Claim 15.

17. Viral particle comprising a recombinant vector according to claim 16.

18. Antitumoral composition, characterized in that it comprises one or more immunogenic polypeptide(s), characterized in that at least one of said polypeptides has the characteristics defined in claims 1 to 10.

19. Use of an antitumoral composition according to one of claims 1 to 15 and 18, of a recombinant vector according to claim 16 or of a viral particle according to claim 17, for the preparation of a medicament intended for the treatment or for the prevention of cancer or of a tumor.

20. Use according to claim 19, for the preparation of a medicament intended for the treatment or for the prevention of cancer of the cervix, of low-grade cervical dysplasia or of a papillomavirus infection.

ADD ENCLOSED